

## **REMARKS**

This paper is in response to the Office action mailed March 31, 2009 ("the Office Action"). The foregoing amendment amends claims 1 and 13. Claims 1-36 remain pending. Applicants respectfully request reconsideration of the application in view of the above amendments to the claims and the following remarks. For Examiner's convenience and reference, Applicants present remarks in the order that the Office Action raises the corresponding issues.

In connection with the prosecution of this case and any related cases, Applicants have, and/or may, discuss various aspects of the disclosure of the cited references as those references are then understood by the Applicants. Because such discussion could reflect an incomplete or incorrect understanding of one or more of the references, the position of the Applicants with respect to a reference is not necessarily fixed or irrevocable. Applicants thus hereby reserve the right, both during and after prosecution of this case, to modify the views expressed with regard to any reference.

Please note that Applicants do not intend the following remarks to be an exhaustive enumeration of the distinctions between any cited references and the claims. Rather, Applicants present the distinctions below solely by way of example to illustrate some of the differences between the claims and the cited references. Finally, Applicants request that Examiner carefully review any references discussed below to ensure that Applicants' understanding and discussion of any reference is consistent with Examiner's understanding.

Unless otherwise explicitly stated, the term "Applicants" is used herein generically and may refer to a single inventor, a set of inventors, an appropriate assignee, or any other entity or person with authority to prosecute this application.

### **I. Rejection Under 35 U.S.C. §102**

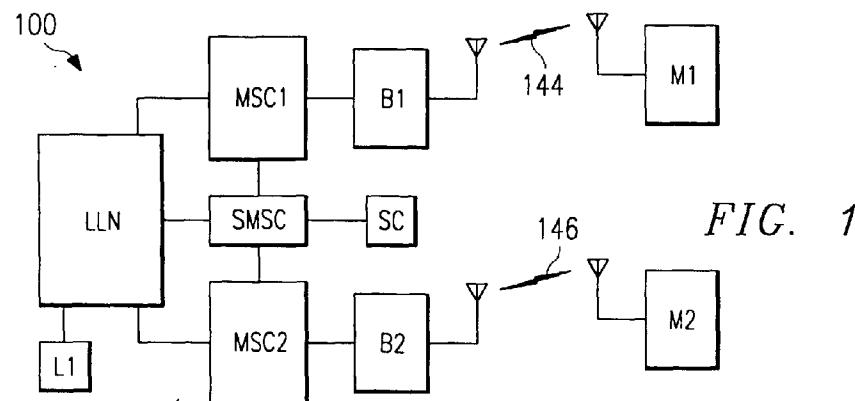
The Office Action rejects claims 1-21 and 25-36 under 35 U.S.C. §102(b) over *Luo et al.* (EP 0 898 397 A2). Applicants respectfully disagree and submit that for at least the reasons set forth below, the rejection of claims 1-21 and 25-36 should be withdrawn. Of the rejected claims, claims 1, 13, 25, 29, and 32 are independent claims.

According to MPEP §2131, a claim is anticipated under 35 U.S.C. §102(a), (b), or (e) only if each and every element as set forth in the claim is found, either expressly or inherently, in a single prior art reference. The reference must show the identical invention in as complete detail as is contained in the claim. Finally, the elements must be arranged or combined as required by the claim.

#### A. Claims 1-21, 25-31, and 36

Claim 1, as amended, recites a transceiver comprising "a controller configured to encrypt a string and supply the encrypted string to a host to authenticate the transceiver, authentication of the transceiver being contingent upon whether or not the transceiver has been certified by a manufacturer of the transceiver and/or a supplier of the transceiver as meeting a specified quality standard." *Luo* does not describe the aforementioned limitations.

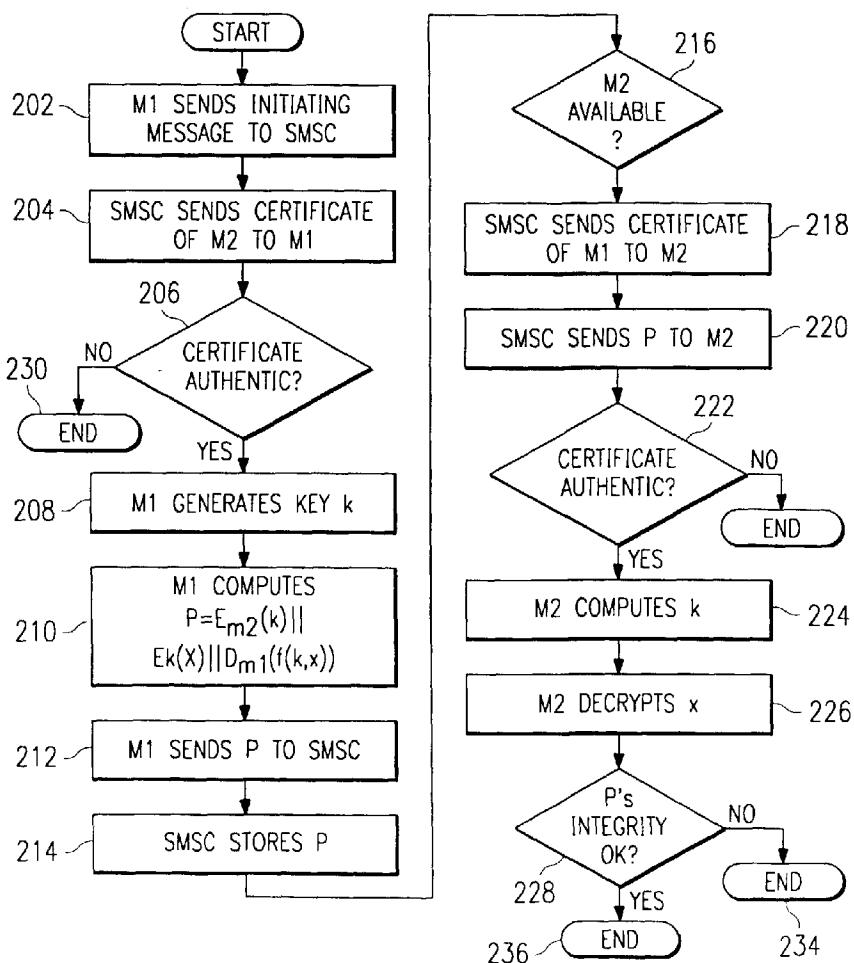
*Luo* is generally directed to a method for secure communication between a first transceiver and a second transceiver (e.g., mobile stations M1 and M2 in Figure 1). *See Luo* at Abstract. Moreover, according to *Luo*, "The method allows authentication of each transceiver by the other." *See id.* Figure 1 of *Luo* is copied below for convenient reference.



The Examiner alleged the short message service center (SMSC) of *Luo* (depicted in Figure 1 above) corresponds to the claimed "host" and that a controller of a transceiver

that communicates with the SMSC is configured to "supply [an] encrypted string to [the SMSC] to authenticate the transceiver." *See Office Action* at 2 and 3. Applicants respectfully disagree with this characterization of *Luo*. Neither one of the transceivers (or mobile stations) M1 and M2 supplies an encrypted string to the SMSC "to authenticate the transceiver." Rather, the SMSC authenticates each transceiver to the other by sending each transceiver the other transceiver's authentication certificate, as depicted in steps 204, 206, 218, and 222 in Figure 2 of *Luo* (copied below for convenient reference).

FIG. 2



Although mobile station M1 is depicted as sending "P to SMSC" in step 212 of Figure 2, the message P is not sent "to authenticate" M1, as required by claim 1. Rather, the SMSC merely relays message P from mobile station M1 to mobile station M2, as

shown at step 220. *See Luo* at ¶ 34 ("M1 sends P to the SMSC in an SMS message... When M2 is available, the SMSC will send the SMS message to M2.")

Moreover, the Examiner alleged that the "bank" in *Luo*, which issues authentication certificates (*see Luo* at ¶ 27), "corresponds to the recited manufacturer or supplier." *See Office Action* at 3. However, claim 1 has been amended to clarify that the manufacturer or supplier is a "manufacturer of the transceiver and/or a supplier of the transceiver" (emphasis added). A "bank" that issues authentication certificates does not manufacture or supply transceivers and therefore does not constitute a "manufacturer of the transceiver and/or a supplier of the transceiver," as presently claimed.

In light of the foregoing deficiencies, the rejection of claim 1, and corresponding dependent claims 2-12 and 36, is not well taken and should be withdrawn.

Claims 13, 25, and 29 differ in scope with respect to claim 1 and with respect to each other but were all rejected with the same grounds of rejection discussed above. Therefore, inasmuch as the rejection of claim 1 lacks an adequate foundation due to certain mischaracterizations of *Luo*, as discussed above, the rejection of claims 13, 25, and 29, and their corresponding dependent claims, similarly lacks an adequate foundation and should be withdrawn.

Furthermore, each of claims 25 and 29 recites limitations that are overlooked by the Examiner and do not appear to be described in *Luo*. For example, claim 25 recites means for authenticating a fiber optic transceiver "upon installation of the fiber optic transceiver," which is not addressed anywhere in the Office Action. Moreover, claim 29 recites "analyzing [an] authentication signal in the host," and "selecting, at the host, one of accepting and rejecting the transceiver based upon the analysis of the authentication signal," which is also left unaddressed by the Office Action. In connection with the foregoing, Applicants respectfully note that failure to identify elements in the prior art that correspond to specific claim limitations is inconsistent with MPEP guidance "to clearly articulate any rejection early in the prosecution process so that the applicant has the opportunity to provide evidence of patentability and otherwise reply completely at the earliest opportunity." *See MPEP* § 706.

## B. Claims 32-35

As to claim 32, the Examiner alleged, that mobile station M2 corresponds “to the recited host” and the message P, sent by mobile station M1 to mobile station M2, “includes the public key of the transceiver.” *See Office Action* at 8 and 9 (“P...includes M1’s public key sent by the M1....”). However, contrary to the Examiner’s assertion, message P does not include a public key. Rather, as shown in step 210 of Figure 2 above, message P is formed by concatenating  $E_{m2}(k)$ ,  $E_k(x)$ , and  $D_{m1}(f(k,x))$  (*see Luo* at ¶ 34), none of which is a public key— $E_{m2}(k)$  is a session key k, used for communications from M1 to M2, encrypted with M2’s public key,  $E_k(x)$  is message x encrypted with session key k, and  $D_{m1}(f(k,x))$  is an integrity value used by M2 to check the integrity of message x. *See Luo* at ¶ 34. Accordingly, no public key is included in message P, as alleged.

Moreover, message P is not requested by M2, contrary to what is required by claim 32: “requesting, by the host, the encrypted transceiver specific public key.” Instead, as shown in steps 212 and 220 in Figure 2 above, message P is sent by M1 to the SMSC and, “[w]hen M2 is available,” the SMSC sends message P to M2. *See Luo* at ¶ 34 (emphasis added). Therefore, even if message P were assumed, for the sake of argument, to include a public key, *Luo* does not describe “requesting, by the host [M2], the encrypted transceiver specific public key [message P].”

In light of the foregoing deficiencies, the rejection of claim 32, and corresponding dependent claims 33-35, is not well taken and should be withdrawn.

## II. Rejection under 35 U.S.C §103(a)

The Office action rejects claims 22-24 under 35 U.S.C §103(a) as being unpatentable over *Luo et al.* (EP 0 898 397 A2) in view of what the Examiner has characterized as “applicant admitted prior knowledge” (APK).

To support an obviousness rejection, MPEP §2143.03 requires “all words of a claim to be considered.” Further, the Board of Patent Appeal and Interferences recently confirmed that a proper, post-KSR obviousness determination requires “a searching comparison of the claimed invention—including all its limitations—with the teaching of the prior art.” *In re Wada and*

*Murphy*, Appeal 2007-3733 (BPAI 2008), citing *In re Ochiai*, 71 F.3d 1565, 1572 (Fed. Cir. 1995) (emphasis added). Moreover, as the Supreme Court recently stated, “there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *KSR Int'l v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007) (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (emphasis added)).

In rejecting independent claim 22, the Examiner alleged that *Luo* discloses a transceiver comprising a controller, “wherein the controller stores a first unique transceiver-specific public key/private key pair for authentication.” *See Office Action* at 11. However, the Examiner acknowledged that “*Luo*...does not expressly disclose that the first unique transceiver-specific public key/private key corresponding with a manufacturer of the transceiver.” *See id.* The Examiner then alleged that “APK discloses that manufacturers and suppliers have developed strict quality standards that must be met before their fiber optic transceivers are certified...This indicates that the transceiver’s public key/private key pair is assigned by the manufacturer to prove the transceiver authenticity.” *See Office Action* at 12. For at least the reasons set forth below, Applicants respectfully disagree.

As an initial matter, it is unclear what public key/private key pair the Examiner refers to in asserting, “This indicates that the transceiver’s public key/private key pair is assigned by the manufacturer to prove the transceiver authenticity.” One possibility is that the Examiner is referring to the public key/private key pair purportedly described in *Luo*. However, this would contradict the Examiner’s earlier acknowledgement that “*Luo*...does not expressly disclose that the first unique transceiver-specific public key/private key corresponding with a manufacturer of the transceiver.”

Alternatively, the public key/private key pair referred to by the above statement is Applicants’ claimed public key/private key pair. If this is the case, however, the Examiner has failed to explain why the public key/private key pair purportedly described in *Luo* should likewise be “assigned by the manufacturer to prove the transceiver authenticity.” Instead, the Examiner appears to have simply assumed, with no analysis, evidence or rationale whatsoever, that the claimed solution necessarily follows from the cloned transceiver problem identified in the APK. That is, the cloned transceiver problem might admit to solution by a wide variety of

different approaches, but the Examiner has completely failed to explain why, faced with that problem, the person of ordinary skill in the art would necessarily arrive at the particular solution recited in the claims. Instead, the Examiner appears to have simply concluded in hindsight and without evidence, analysis or rationale, that "...the transceiver's public key/private key pair [in *Luo*] is assigned by the manufacturer..." because that is the solution to the cloned transceiver problem identified in Applicants' specification.

Inasmuch as the rejection of claim 22 relies on conclusory statements and hindsight analysis by the Examiner, unsupported by articulated reasoning with some rational underpinning, the rejection lacks merit. Applicant thus submits that the rejection of claims 22-24 should be withdrawn.

### **III. Charge Authorization**

The Commissioner is hereby authorized to charge payment of any of the following fees that may be applicable to this communication, or credit any overpayment, to Deposit Account No. 23-3178: (1) any filing fees required under 37 CFR § 1.16; (2) any patent application and reexamination processing fees under 37 CFR § 1.17; and/or (3) any post issuance fees under 37 CFR § 1.20. In addition, if any additional extension of time is required, which has not otherwise been requested, please consider this a petition therefor and charge any additional fees that may be required to Deposit Account No. 23-3178.

**CONCLUSION**

In view of the foregoing, Applicants submit that the pending claims are allowable. In the event that Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview or overcome by an Examiner's Amendment, Examiner is requested to contact the undersigned attorney.

Dated this 31st day of July, 2009.

Respectfully submitted,

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